Date

Form C-104 Rev. 2/01

CONSTRUCTION VALUE ENGINEERING CONCEPT PROPOSAL MISSOURI DEPARTMENT OF TRANSPORTATION

		Date <u>4/22/08</u>
Contract ID 080229-101		Job No. <u>J110981 & J111014</u>
County Atchison/Holt	Route I-29	Original Bid Cost \$14,086,569.43
Contractor IDEKER, INC.		By PAUL IDEKER
Designed By		Phone (816) 364-3970
VE # 08-30		
1. Description of existing re	quirements and proposed c	hange(s). Advantages/Disadvantages
Disadvantages: Grea	ter cost, greater use of natura	
		cycle, 0.75" BP-3 shoulder (14' & 16' lanes w/ 8'
shoulder) Advantages: Le	ess usage of natural resources	s, greater or equal life cycle
O Tradition and a contract language		
2. Estimate of reduction in c		\$1,834,040.82
3. Prediction of any effects to maintenance and operation		have on other department costs, such as
•		_
_	decreased maintenance cost: - reduces upspray and increa	
	complete project - less inconv	• • • • • • • • • • • • • • • • • • • •
4. Anticipated date for subm Specifications.		f items required by Section 104.6 of the
	04/22/08 (date)	<u> </u>
	(uate)	·
5. Deadline for issuing a chan completion time or delivery		m cost reduction, noting the effect of contract
05/05/2008	mat. suppliers will need to	begin producing in order to keep on schedule
(date)		(effect)
6. Dates of any previous or co	ncurrent submission of the	same proposal.
	n/a	
<u></u>	(date and/or da	tes)
		•

Additional Comments:

Please see attached spreadsheet itemizing the potential V.E. savings. As per our verbal agreement, V.E. to be divided 70% Modot, 30% Ideker.

** Portion Below This Line To Be Filled Out by MoDOT **

Comments: See att	ached note and spread si	rect.
		•
Jan	Submitted By Resident Engineer	4-23-08
	Submitted By Resident Engineer	Date
Comments:		
Comments:	Eorue with RE	='s Recommendations
		•
Approval Recommended Rejection Recommended	District Engineer	4-29-08 Date
☐ Recommended	District Enginees	D4te
	<u> </u>	
Comments: Profilograph sha	Il be run after.	the HIP. Smoothnes
Chip, surface on its surface	Il be run after to be made prior as no griding wil	be allowed
Approval	David D. Com	5-6-08
Rejection	State Operations Engineer BA	Date Date

Quantity Adjustments For April 21, 2008 Revision/Amendment Letter

Job No.J11098, Holt County

Quantity changes for pavement section Sta. 792+09 to 797+06.5 (1.75" sp125 mill & fill)

Line Item	Desription	Quantity	Unit	Cont	ract Unit \$	Total
	U.B.A.W.S. Type C	-3867	SY	\$	4.99	\$ (19,296.33)
	BP-3 (3/4")	-29	Tons	\$	58.48	\$ (1,695.92)
290	Bit. Pavmt Mix BP-1	130	Tons	\$	134.66	\$ 17,505.80
310	Asphaltic Conc. Mix PG 76-22 (SP125B)	308	Tons	\$	149.66	\$ 46,095.28
						\$ 42,608.83

Quantity changes for 30' bridge ends (2" sp125 mill & fill) 24' mainline, 4' & 10' shoulder

Line Item	Desription	Quantity	Unit	Contract Unit \$		Total
	U.B.A.W.S. Type C	-1400	SY	\$ 4.99	\$ \$	(6,986.00)
	BP-3 (3/4")	-16	Tons	\$ 58.48	3 \$	(935.68)
	Bit. Pavmt Mix BP-1	62	Tons	\$ 134.66	3 \$	8,348.92
300	Misc.Hot-In-Place Recycle 2"	-1120	SY	\$ 4.09	\$	(4,580.80)
310	Asphaltic Conc. Mix PG 76-22 (SP125B)	108	Tons	\$ 149.60	\$	16,163.28
330	Hot-In-Place Liquid Asphalt	-392	Gals	\$ 2.18	\$ \$	(854.56)
340	Coldmilling 3" or less	1773	SY	\$ 3.67	\$	6,506.91
					- \$	17.662.07

Job No. J1l1014, Atchison County

Quantity changes for 30' bridge ends (2" sp125 mill & fill) 24' mainline, 4' & 10' shoulder

Line Item	Desription	Quantity	Unit	Contr	act Unit \$		Total
	U.B.A.W.S. Type C	~800	SY	\$	4.95	\$	(3,960.00)
	BP-3 (3/4")	-9	Tons	\$	57.51	\$	(517.59)
680	Bit. Pavmt Mix BP-1	40	Tons	\$	126.16	\$	5,046.40
690	Misc. Hot-in-Place Recycle 2"	-640	SY	\$	4.09	\$	(2,617.60)
700	Asphaltic Conc. Mix PG 76-22 (SP125B)	. 72	Tons	\$	141.16	\$	10,163.52
720	Hot-In-Place Liquid Asphalt	-224	Gals	\$	2.18	\$	(488.32)
730	Coldmilling 3" or less	1013	SY	\$	3.64	\$	3,687.32
			· · · · · · · · · · · · · · · · · · ·			4	11 313 73

"Revised" I-29 U.B.A.W.S. Value Engineering Proposal

	th (-29 Project					
Original Conti						
Line item	Desription	Orlginal Quantity		Contract Unit \$		
	10 Misc. Type 1 Agg. For Base		Tons	•		32,960.70
	210 Modified Coldmilling	19217		\$ 3.61		69,373.37
	290 Bit. Pavmt Mix BP-1	32040.9				1,477,085.49
	300 Misc.Hot-In-Place Recycle 2"	460281		\$ 4.09	•	1,882,549.29
	310 Asphallic Conc. Mix PG 76-22 (SP125B)	49227.9		•	•	2,893,615.96
	320 Tack Coat	17200	Gals	\$ 1.33	\$	22,876.001
,	330 Hot-In-Place Liquid Asphalt	161098.3	Gals.	\$ 2.18		351,194.29
	340 Coldmilling 3" or less	8212	\$Y	\$ 3.67	•	30,138.04 ⁻
	350 Coldmilling Greater Than 3"	2842	SY	\$ 4.55		12,931.10
					\$	6,772,724.25
Proposed Cha	nges					<i>V</i> (
Line Item	Desription	Original Quantily	Unil	Contract Unit \$	Total	_
-	U.B.A.W.S. Type C	609243.8	SY/	\$ 4. 9 9	\$	3,040,126.56
	BP-3 (3/4")	7493	Tons'	\$ 58.48	\$	438,190.64
	10 Misc. Type 1 Agg. For Base	318	Tons	\$ 20.73	\$	6,592.14
	210 Modified Coldmilling	13617	SY 🗸	\$ 3.61	\$	49,157.37
	290 Bit. Pavmt Mix BP-1	192	Tons/	\$ 134.66	\$	25,854.72
	300 Misc.Hot-In-Place Recycle 2"	459161	\$Y 🖊	\$ 4.09	\$	1,877,968.49
	310 Asphaltic Conc. Mix PG 76-22 (SP1258)	416	Tonsv	\$ 149.66	\$	62,258.56
	320 Tack	3784	Gal 🖊	\$ 1.33	\$	5,032.72
	330 Hot-In-Place Liquid Asphalt	160706	Gals ^	\$ 2.18	\$	350,339.08
	340 Coldmilling 3" or less	7185.8	\$Y	\$ 3.67	\$	26,371.89
	350 Coldmilling Greater Than 3"	/ 1109	sy/	\$ 4.55	- \$	5,045.95
	,	5/112.			\$	5,886,938.12
				Net Difference	\$	885,786.13

	o. North I-29 Project					
Original Con		Original Overhily	Unit	Contract Unit \$	Total	
Line Item	Description	Original Quantity	Tons			72,632.16
	400 Misc. Type 1 Agg. For Base	12678		•		45,514.0
	600 Modified Coldmilling		•	•	•	
	680 Bit. Paymt Mix BP-1	27326.9		•	-	1,348,309.2
	690 Misc. Hot-in-Place Recycle 2"	393909.5		\$ 4.09	•	1,611,089.8
	700 Asphaltic Conc. Mix PG 76-22 (SP125B)	42582		•		2,520,428.5
	710 Tack Coat	14950		\$ 1.33		19,883.5
•	720 Hot-In-Place Liquid Asphalt	137868.6		\$ 2.18	-	300,553.5
	730 Coldmilling 3" or less	6958	SY	\$ 3.64	\$	25,327.1
					\$	5,943,738.0
roposed Ch	anges Desription	Original Quantily	Unit	Contract Unit \$	Total	
	U.B.A.W.S. Type C	533473.5				2,640,693.8
	BP-3 (3/4")	6441	Tons	√\$ 57.51	\$	370,421.9
	400 Misc. Type 1 Agg. For Base	734	Tons.	/\$ 19.78	\$	14,518.5
	600 Modified Coldmilling	6767	SY /	\$ 3.59	\$	24,293.5
	660 Bit. Paymt Mix BP-1		Tons.		\$	5,046.4
	690 Misc. Hol-in-Place Recycle 2"	393269.5	sY /	\$ 4.09	\$	1,608,472.2
	700 Asphaltic Conc. Mix PG 76-22 (SP125B)		Tons'		•	10,163.5
	710 Tack Coat	3887				5,169.7
	720 Hot-In-Place Liquid Asphalt	137644.6		2	-	300,065.23
	730 Coldmilling 3" or less	4571		\$ 3.64	\$	16,638.4
	100 Columning C C 1000	755%		4 4/4/	\$	4,995,483.3
				Net Difference	5	948,254.6

As discussed at our March 17, 2008 meeting and in my letter dated March 27, 2008, the concept of the value-engineering proposal was accepted. (See attached letter.)

All items were addressed in the letter and proposal except; the ramp quantities are included in the proposed change from 1 \(^4\) inch SP125 to \(^3\)4 Nova Chip with a \(^4\)4 inch BP-3 shoulder. I have reviewed the ramp, acceleration and deceleration lanes and think the change will work with the addition of minor repairs to failed shoulders.

The plans also show Hot-in-Place Recycling up to the bridge ends, and a cap of 1 \(^3\)4 inches of SP125 B mix. Dustrol, Inc. has stated they cannot HIP up to the bridge ends, but must stop about 30 feet away to turn the burners off and not cause damage to the bridge. Ideker has revised their proposal to include 1 \(^3\)/4 inches of SP125 B mix within 30 feet of bridges. Along with this proposed change, they have proposed a change to the BP-1 and SP125 B unit prices as follows:

Holt County	<u>Bid</u>	New Cost
Line 290 BP-1	\$46.10	\$134.66 per ton
Line 310 SP125 B	\$58.78	\$149.66 per ton
		•
Atchison County	<u>Bid</u>	New Cost
Line 680 BP-1	\$49.34	\$126.16 per ton
Line 700 SP125 B	\$59.19	\$141.16 per ton

The costs are high, but I believe applicable for the short paving, handwork required and small quantities. This amounts to an additional cost of \$666.01 per bridge end in Holt County (14 locations) and \$550.72 in Atchison County (8 locations) compared to the original contract costs and items.

The cost of the Type C UBAWS is proposed at \$4.99 and \$4.95 per square yard for the Holt and Atchison County jobs, respectively. This is less than a 5% increase from the \$4.77 per square yard price average in 2007.

The cost of the BP-3 mix is proposed at \$58.48 and \$57.51 per ton, respectively. This is a 7.5% to 6.0% increase from the \$54.33 per ton price average in 2007.

If excessive rutting is observed during construction, I recommend re-evaluating the Nova Chip treatment on the Hot-in-Place recycled asphalt.

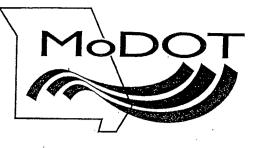
The overall changes are estimated to be \$1,834,040.82. I have reviewed the quantities and believe the "coldmilling 3 inches or less" is a greater reduction than Ideker estimated. Attached is a spreadsheet detailing the changes. The anticipated 70/30 percent cost sharing will be \$1,290,966.59 for MoDOT and \$553,271.40 for Ideker.

I recommend we accept the above prices as submitted.

Larry Lacobson

Resident Engineer

Missouri Department of Transportation



Maryville Project Office 28320 250th Street Maryville, MO 64468 660-582-3300 Fax 660-562-2461 Toll free 1-888-ASK MoDOT www.modot.org

Larry Jacobson, Resident Engineer



2007 Missouri Quality Award Winner

March 27, 2008

Ideker, Inc. Mr. Paul Ideker P.O. Box 7140 St. Joseph, MO 64507

Subject:

Value Engineering Proposal #1

Contract ID: 080229-101

Job No(s): J110981 and J111014

Route: I-29

County(s): Holt and Atchison

Dear Mr. Ideker.

We have reviewed your conceptual proposal submitted on March 17, 2008, by email, for the subject projects. You proposed to replaced the SP125B surface on the mainline with Type C ultrathin bonded wearing surface and the BP-1 on the shoulder with a fog seal.

During our meeting on March 26th, the following option was proposed:

- 1. Replace the 1 ¾ inch SP125B mix with ¾ inch ultrathin bonded wearing surface Type C novachip. Sixteen (16) foot wide passing lanes and inside shoulders, fourteen (14) foot wide driving lanes.
- 2. Replace the 1 ¾ inch BP-1 shoulder with ¾ inch BP-3 shoulder.
- 3. Keep the profilograph specification requirement on the mainline pavement.
- 4. Use the slope treatment rock only where the drop off warrants. This item is anticipated to be eliminated.
- 5. The VE savings will be split: 70% MoDOT, 30% Ideker.

The anticipated savings for items 1 and 2 is \$1.7 million total.

We are approving your conceptual proposal as revised during our meeting.

We are currently reviewing the jobs to get an accurate measured area for the novachip to be applied. The SP125B and BP-1 will be reduced by the mainline quantities. There is currently no plan change for the ramps, therefore, the SP125B and BP-1 quantities for the ramps will remain.

The following line items will be effected:

<u>Line</u>	<u>Description</u>
290	Bituminous pavement mixture BP-1
310	Asphaltic concrete mixture PG 72-22 (SP125B mix
680	Bituminous pavement mixture BP-1
700	Asphaltic concrete mixture PG 76-22 (SP125 mix)

Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.

Ideker, Inc. Value Engineering Proposal #1 Page 2

Additional Items:

Item code 413-32.00

Ultrathin bonded wearing surface, Type C paid by the square

yard for each project.

Item code

401-12.13

Bituminous pavement mixture PG 64-22, paid by the ton for

each project.

The following items may be adjusted based on slopes and rundown lengths:

<u>Line</u>	<u>Description</u>
010	Type 1 Aggregate for Base
210	Modified cold milling (depth transitions)
340	Cold milling(3 inches or less)
350	Cold milling(greater than 3 inches)
400	Type 1 Aggregate for Base
600	Modified cold milling (depth transitions)
· 7.30	Cold milling(3 inches or less)

Please provide a unit price for the ultrathin bonded alternate wearing surface (UBAWS) and BP-3.

If you should have any questions or concerns, please feel free to contact me.

Sincerely

Larry Jacobson Resident Engineer

jb

												e						MoDOT Ideker	70% 30%	-\$550,21																							MoDOT	%02	-\$1,290,966.59 -\$553,271.40	
New proposed costs \$3,040,126.56	\$438,190.64 \$6,502.43	\$49,157.37	\$25,854.72	\$1,877,968.49 \$62.258.46	\$5,032,72	\$350,339.08	\$26,371.89	\$5,045.95	\$2,640,693.83	\$3/0,421.91 \$14 518 52	\$24 293 53	\$5.046.40	\$1.608.472.26	\$10,163.52	\$5,169.71	\$300,065.23	\$16,638.44	\$10,882,421.46		-\$1,834,040.82			Ivew proposed costs	\$4,040,120.30 \$438,100,64	\$6.592.14	\$49.157.37	\$25,854,72	\$1,877,968.49	\$62,258.56	\$5,032.72	\$350,339.08	\$19,862.04	\$5,045.95	\$2,640,693.83	\$370,421.91	404,016.02	\$5,046.40	\$1,608,472.26	\$10,163.52	\$5,169.71	\$300,065.23	\$12,951.12	\$10.872.224.29		-\$1,844,237.99	
New proposed quantity N 609243.8	7493	13617	192	459161	3784	160706	7185.8	1109	533473.5	734	2929	40	393269.5	72	3887	137644.6	4571			Difference		New Address of Author Melvin	~	7493	318	13617	192	459161	416	3784	160706	5412	1109	533473.5	734	79C9	40	393269.5	72	3887	137644.6	3558			Difference	
New proposed cost \$4.99	\$58.48		\$134.66	\$149.66					\$4,93 57,774			\$126.16		\$141.16								New proposed cost	\$4 99	υ.			\$134.66		\$149.66					\$4.93 \$57.64			\$126.16		\$141.16							
Plan costs \$0.00	\$32,9		\$1,477,085.49			↔		\$12,931.10		\$72,6				\$2,		69	\$25,327.12	\$12,716,462.28				Plan costs			\$32,6				\$2,	\$22,876.00		930,138,04			\$72.6		\$1,		\$2,		69	\$25,327.12	\$12,716,462.28			
Unit Cost Plan	\$20.73 1590		\$46.10 32040.9 \$4.09 460281	`	.33	18 161	\$3.67 8212 \$4.55 2842	3		367	.59	34	33	\$59.19 42582		\$2.18 137868.6 \$3.64 6059		Total			g difference	Unit Cost Plan		0		\$3.61 19217	• •	\$4.09 460281	4	\$1.33 1/200					.78 367	•	Ŋ	39			\$2.18 13/868.6	43.04 0830	Total			
Idekers Proposal Line Description UBAWS Type C BP-3	10 Misc. Type 1 Agg for Base	210 Modified Coldmilling	300 Misc. Hot In Place Recycle 2 "	310 Asphaltic Concrete Mix, PG76-22 (SP125B)	320 Tack	330 Flot In Place Liquid Asphalt 340 Coldmillion 3" or less	350 Coldmilling Greater than 3"	UBAWS Type C	BP-3	400 Misc. Type 1 Agg for Base	600 Modified Coldmiling	680 Bit. Pavement Mix BP-1	690 Misc. Hot In Place Recycle 2 "	700 Asphaltic Concrete Mix, PG76-22 (SP125B)	700 USA 12 Discontinuid Apartment	730 Coldmilling 3" or less							VS Type C		10 Misc. Type 1 Agg for Base	210 Modified Coldmiling	290 Bit. Pavement Mix BP-1	300 Misc. Hot In Place Recycle 2 "	320 Tack	330 Hot in Place Lightid Asphalt	* 340 Coldmilling 3" or less	350 Coldmilling Greater than 3"	UBAWS Type C	BP-3	400 Misc. Type 1 Agg for Base	600 Modified Coldmiling	680 Bit. Pavement Mix BP-1	690 Misc. Hot In Place Recycle 2 "	740 Asphaltic Concrete Mix, PG76-22 (SP125B)	700 Hot la Diana Limita Acadesis	* 730 Coldmilling 3" or less					



FAX Transmission

Missouri Department of Transportation

Project Office District 1 Construction & Materials

To:

Brian A Williams

Title: Construction & Materials Liaison Eng.

Fax: 573-526-4354

From: Troy Slagle/Lisa Kellison

Questions? Call:

816-387-2442

Fax: 816-387-2486

Date: 05/02/2008

Time: 9:45 AM

Pages: 14 (including this one)

Message: Please find enclosed information regarding the Job J110981, J111014 Route I-29 Atchison & Holt Counties.

Hard copy to follow in the mail.

If you have any questions, please call.

Thank you,

Lisa Kellison Office Assistant Construction & Materials - D1 816-387-2442

MEMORANDUM



Missouri Department of Transportation Operations District 1

TO:

Dave Ahlvers

Brian A. Williams

FROM:

Troy Slagle

Operations Engineer

DATE:

April 30, 2008

SUBJECT:

Value Engineering Proposal

Contract I.D.: 080229-101 Job No.: J110981, J111014

Route: I-29

County: Atchison & Holt Counties

Please find attached the Construction Value Engineering Proposal submitted by Ideker Inc. for the above project to Larry Jacobson, Resident Engineer in Maryville, Missouri.

I have reviewed the proposal and Larry's suggested comments and concur providing the supporting documentation asked for in my recommended approval is received. Please review and return with your recommendation and signature to the district office.

If more information is required for this proposal, please advise.

MEMORANDUM



Missouri Department of Transportation Maryville Project Office District 1

TO:

Troy Slagle-1ca

FROM:

Larry Jacobson

Resident Engineer

DATE:

April 23, 2008

SUBJECT:

Value Engineering Proposal #1

Contract ID 080229-101 Job No.(s): J1I0981, J1I1014

Route 29, Holt and Atchison Counties

Please find the attached information pertaining to the Value Engineering Proposal on the subject project. A hard copy will follow by mail.

If you should have any questions, I can be reached at 660 582-3300.

jb



IDEKER, INC.

Earth Moving • Concrete • Asphalt

Date_4/22/08		
Total Number of Pages	(Including Cover Sheet)	
Deliver To Larry Jacob Company Name Mo DOT	OS DYI	
Fax Number 660-567-21	461	· ,
Sending Party Taul Message (If Any): Hard Copy to follow) by Mail	-



IDEKER, INC.

Earth Moving • Concrete • Asphalt

April 21, 2008

Larry Jacobson, Resident Engineer MoDOT, Maryville Project Office 28320 250th Street Maryville, MO 64468

Re:

Revision/Amendment to Value Engineering Proposal

Contract ID: 080229-101

Route I-29

Holt & Atchison Co.

Dear Mr. Jacobson:

As per our conversations, I am revising/amending the value engineering proposal to address your concerns regarding the bridge approaches on the above referenced project.

Job Number J1I0981, Holt County plan sheets 56, 58, and 59 and Job Number J1I1014, Atchison County plan sheet 33 indicate hot-in-place recycle beginning and ending at the bridge ends. Due to the extreme amount of heat generated by the hot-in-place recycle process, Dustrol has expressed concerns that constructing the h.i.p. recycle per plan could potentially damage the existing bridge ends. Per conversations with Ron Wilson of Dustrol, he has indicated they can h.i.p. recycle up to 30 feet from each end of the bridges. Therefore, to address your concern about pavement structure at the bridge ends, Ideker is proposing to mill and replace 2" with SP125B 76-22 for approximately 30' on each side of each bridge.

I am also revising the v.e. quantities and prices to reflect the section of pavement between station 792+09 to 797+06.50. To address your concerns of the u.b.a.w.s in this section, we will construct per original plan. The original plans show this section to be a 1.75" SP125 pg76-22 mainline and BP-1 shoulder mill and replace.

The coldmilling quantities have been updated to reflect the quantities you sent me in the letter dated April 16, 2008 and the additional coldmilling for the bridge ends.

Due to the small quantities and numerous locations, I have revised the prices for the following items:

Job No. J110981, Holt County:

Line item 290	Bit. Pavement Mix BP-1	\$134.66 per ton
Line item 310	Asph. Conc. Mix pg76-22 SP125B	\$149.66 per ton

Job No. J111014, Atchison County:

Line item 680	Bit. Pavement Mix BP-1	\$126.16 per ton
Line item 700	Asph. Conc. Mix pg76-22 SP125B	\$141.16 per ton

The revised anticipated savings for the value engineering proposal is \$1,834,040.82

Please see attached a summary of all the changes along with a revised v.e. proposal,

If you have any further questions, please do not hesitate to call.

Sincerely,

Paul Ideker

VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- □ Bridge/Structure/Footings
- □ Drainage Structures (RCP, RCB, CMP's, ect.)
- □ TCP/MOT
- X Paving (PCCP, ect.)
- □ Grading/MSE Walls
- □ Signal/Lighting/ITS
- □ Misc.

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

This VE changes to driving surface from $1\frac{3}{4}$ " superpave to a $\frac{3}{4}$ " nova chip. It also reduces the shoulder depth from $1\frac{3}{4}$ " BP-1 mix to a $\frac{3}{4}$ " BP-3 mix. This is a 70/30 cost share.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.	